CVP Power Initiative Implementation Plan

Last Revised: **5/19/2020**

	Milestone	Action	Target Completion	Status	Completion Date
I. Reporting and Implementation					
	(I).1.a. - Provide a report of implementation to the Commissioner and Deputy Commissioners.				
		Develop a schedule with reporting milestones within 60 days of memo.	8/23/2019	Reclamation provided a coordinated action plan, complete with milestones, tasks and target completion dates for each directive on August 23. All information can be found here https://www.usbr.gov/mp/hydro.html.	8/23/2019
	(I).1.b. - Provide an implementation status report to the Commissioner and Deputy Commissioners.				
		Provide an implementation status report of the action plan within 120 days of memo.	10/23/2019	This revised plan as of October 18, 2019 is the 120-day status report.	10/18/2019
		Provide a status report every 6 months.	4/20/2020	This revised plan as of May, 2020 and presented to the next customer forum (CCC), scheduled on June 2, 2020.	5/18/2020
		Provide a status report every 6 months.	10/16/2020		
		Provide a status report every 6 months.	4/15/2021		
		Provide a status report every 6 months.	10/12/2021		
		Provide a status report every 6 months.	4/8/2022		
II. Implementation - Cost Stability - Predictability and Transparency					
	(II).1.a. - Work with customers, WAPA and project proponent for Sites/North-of-Delta Off-Stream Storage (NODOS) Project on hydropower purpose analysis.				
		Discuss analysis of benefits, costs, and financial impacts associated with the draft feasibility report's inclusion of a hydropower purpose to the proposed Sites/NODOS project with power customers at Power Customer Coordination Committee (CCC) meeting.	1/15/2019	Discussion Initiated in January 2019 customer meeting and ongoing per customer request to receive updates.	3/13/2019
		Draft Lt-Gen hydropower purpose analysis for Sites/NODOS project discussion with power preference customers.	2/11/2019	USBR currently has appendixes within the SITES/NODOS FR describing the power model assumptions, methods, and models used for the Sites and is still waiting on the Sensitivity Analysis, Findings, and Recommendations Chapters. AECOM intends to finish those by May 21st. LTGen, SWP_Power, and other models are being used to update this study and provide analysis for Sites/NODOS power impacts. And all the costs and benefits are further refined.	FR results expected by July 2020.
		Submit administrative Final Feasibility Report to Commissioner's Office.	10/31/2020	USBR currently has apendixes within the SITES/NODOS FR describing the power model assumptions, methods, and models used for the Sites and is still waiting on the Sensitivity Analysis, Findings, and Recommendations Chapters. AECOM intends to finish those by May 21st.The FR will next go to a Policy Compliance Review scheduled June 8th, the results will be briefed to the Commissioner July 8th. This FR updated CALSIM to 2020 (From 2011) operating conditions. Briefing of new FR to the Commissioner expected on July 8, 2020. Next public comment period would be after a revised and recirculated EIR, which is expected to be released for public review in Summer 2021.	
		Submit administrative Final Environmental Impact Statement to Commissioner's Office.	10/31/2020	The previous FR used a CALSIM model from 2011, this FR updated CALSIM to 2020 operating conditions. And all the costs and benefits are further refined. A revised and recirculated EIR is expected to be released for public review in Summer 2021.	
		Participate in regular calls and discussions with Joint Power Authority to develop operations plan proposal.	Ongoing	Participating in Reservoir Committee and Executive Committee meetings.	Ongoing
		Work with WAPA, customers and project proponents to finalize operations plan after determination of feasibility.	TBD	Schedule will be created after determination of Feasibility; Principles of Operation and basic guidelines include no harm to CVP Operations	
	(II).1.b. - Communicate any modifications to the benefits analysis in the NODOS Feasibility Report to power customers and appropriate stakeholders.				

		Draft Lt-Gen benefits analysis for Sites/NODOS project for discussion with power preference customers.	2/11/2019	Draft Lt-Gen analysis is still in work. MP-700 currently reviewing models and analysis from the Sites/NODOS 2020 Feasbility Study. USBR currently has apendixes describing the power model assumptions, methods, and models used for the Sites and is still waiting on the Sensitivity Analysis, Findings, and Recommendations Chapters. AECOM intendes to finish those by May 21st. USBR Provided updates to NODOS/Sites to Power customers on 2/11/2020 CCC meeting and will continue to update power customers as more chapters/information becomes official.	2/11/2020
		Submit administrative Final Feasibility Report to Commissioner's Office.	10/31/2020	Expected in July 2020	
		Submit administrative Final Environmental Impact Statement to Commissioner's Office.	10/31/2020		
		Participate in regular calls and discussions with Joint Power Authority to develop operations plan proposal.	Ongoing	Participating in Reservoir Committee and Executive Committee meetings.	Ongoing
		Work with WAPA, customers and project proponents to finalize operations plan after determination of feasibility.	TBD	Schedule will be created after determination of Feasibility; Principles of Operation and basic guidelines include no harm to CVP Operations	
	(II).1.c. - Work with non-federal cost share partners, preference power customers, WAPA and stakeholders for Shasta Raise hydropower purpose analysis.				
		Provide Shasta Dam Raise updates at WAPA CCC meeting to ensure benefits, costs, and financial impacts associated with the draft Feasibility Report's inclusion of a hydropower purpose to the proposed project are analyzed, evaluated, and considered as the project moved forward.	8/22/2019	Complete.	8/22/2019
		Lt-Gen corrections for power benefits due/to-be-completed.	11/1/2019	Lt-Gen and PLEXOS models continue to be analyzed by Reclamation. Lt-Gen model may be overpredicting generation and therefore planning division is reviewing model and looking for solutions. They are currently migrating to a greater focus on Lt-Gen for power modeling, instead of PLEXOS. Currently finishing CalSim modeling and then will pivot focus on Lt-Gen. As of May 2020, this is still be analyzed.	
		Contract to be awarded to provide additional PLEXOS runs to improve hydropower benefits analysis.	11/1/2020	Contract awarded. Complete.	8/19/2019
		Complete revised benefits analysis.	12/31/2019	Benefits analysis will be provided at the power customer meeting following completion. Currently reviewing the modelling results of the revised benefits analysis.	
	(II).1.d. - Work with preference power customers and WAPA as appropriate on other feasibility studies.				
		Discuss as a part of Reclamation's "Power Update" at all Power Customer CCC meetings to ensure the benefits, costs, and financial impacts associated with the inclusion of a hydropower purpose for proposed projects are analyzed, evaluated, and considered as projects move forward.	Ongoing	As reported at the power update provided at the October 10, 2019 CCC meeting, a Reclamation team has actively been analyzing the models LT Gen and Plexos to assess the level of accuracy appropriate for feasibility studies. As of April, 2020, this is still ongoing.	Ongoing
	(II).1.d.1. - If feasibility is appropriately determined and Congressional authorization provided for a project - work with power customers, WAPA, project proponents, water contractors, and stakeholders to develop detailed operations plan.				
		Modify appropriate internal directives to include outreach for stakeholders and power marketing agencies. Determine if additional outreach is required before feasibility is determined and add to appropriate directives and standards (if not already included).	7/31/2020	Following release of Appraisal Study D&S (CMP 09-01) and Planning Policy (CMP P09), Reclamation will begin updates to CMP 09-02 in 2019. CMP 09-02 was revised on December 12, 2019. As D&S are updated, BOR will provide updates to CVP Power customers as relevant.	Complete 12/12/2019
		Reclamation's Planning Office (MP-700) will begin coordination and development of detailed operations plan if and when feasibility is appropriately determined and Congressional authorization is provided for a project.	Ongoing	Work will occur if/when feasibility is determined for any proposed project.	Ongoing
	(II). 1.e. - Develop a Standard Operating Procedure (SOP) to document methodology and procedures for construction cost recovery.				
		Meet with CVP Financial Affairs Committee (FAC) to determine items for SOP.	7/19/2019	Reclamation met with the CVP FAC and determined the SOP will document what Reclamation will do to ensure repayment is accomplished by 2030.	7/19/2019
		Develop draft SOP within 60 days of meeting with FAC.	9/17/2019	An SOP has been drafted and is under internal review.	
		Share draft SOP at next FAC meeting.	9/20/2019		
		Share draft SOP at WAPA CCC Customer Meeting.	10/10/2019		
	(II).1.f. - Develop aid-to-irrigation document for Water Infrastructure Improvement for the Nation (WIIN) Act projects.				

		Develop document describing handling of aid-to-irrigation for WIIN Act construction prepayment and new construction projects funded under WIIN authorities within 60 days of memo.	8/28/2019	Reclamation provided a presentation and consulted with water and power stakeholders on TRMR #122, which was then finalized August 2019. The document can be found here: https://www.usbr.gov/recman/temporary_releases/pectrmr-122.pdf	8/28/2019
	(II).1.g. - Share the SOP documenting the methodology for treatment of non-permanent revenue.				
		Share draft SOP with customers at customer CCC meeting.	10/10/2019	Two draft SOP's have been prepared. They are being reviewed internally and shared with Reclamation FAC customers prior to sharing with WAPA for their comments. Still in Internal review process.	
		Discuss two finalized SOPs with power customers at CCC meeting.	10/10/2019	To be shared at a CCC meeting following internal review of the SOP.	
		Finalize SOP, which identifies (a) what this revenue represents (definition of this water), (b) the justification for the accounting process, and (c) description of the rate-setting schedules.	11/1/2019		
		Review the guidelines annually.	11/1/2020		
	(II).1.h. - Work with WAPA to maintain 10-year forecast of capital improvements. Review with customers at Technical Committee Meetings.				
		Complete 10-year forecast of capital improvements for CVP power infrastructure.	8/6/2019	Complete and ongoing revisions tied to each MMPPC meeting.	8/6/2019
		Reclamation provided a presentation and an opportunity to review the 10-year forecast with CVP customers at Technical Committee Meetings.	8/6/2019	This was provided at the MMPPC and Technical Committee Meeting and finalized August 2019. - Complete and ongoing.	8/6/2019
		Update 10-year forecast annually.	8/1/2020	For latest updates, please contact Steve Melavic at smelavic@usbr.gov. The forecast is being revised and shared with power customers more frequently than annually (MMPPC, Technical Committee and CCC meetings). This has been included as part of the agenda for each meeting and is updated regularly. Updates are shared at each meeting as part of the agenda.	Complete
	(II).1.i. - Work with WAPA, power customers, and stakeholders to develop a variance percentage threshold between budgeted and actual expenditures.				
		Reclamation will seek customer and stakeholder input on appropriate variance percentage threshold.	10/31/2019	Coordinate variance percentage determination with WAPA, power customers and stakeholders.	In progress
		Determine appropriate variance percentage threshold between budgeted and actual expenditures for transparency of multipurpose O&M and construction costs.	1/13/2020		
		Document and share variance percentage commitment with power customers.	6/1/2020	This information will be shared at CCC meeting.	
	(II).1.j. - Implement benchmarking of CVP hydropower data and share annually.				
		Prepare preliminary report outlining results of cost and operational data for CVP generators.	10/31/2019	Reclamation continues to develop this report and will share when completed. Suggested metrics for the data shared with customers via email. CVO Office shared Benchmarking data from 2016-2018 with Power customers in February 2020 at the TC Meeting	2/6/2020
		Share results with Reclamation management and power customers.	10/31/2019	Results were shared at customer TC meeting in February 2020 following completion. This is an annual requirement and will continue each year after benchmarking results are finalized.	2/6/2020
		Prepare and share report with Reclamation management and power customers annually.	10/31/2020	Results will be shared at TC meetings annually.	Ongoing
III. Implementation - Lost Production Opportunities					
	(III).1.a. - Use best available science with plant bypass operations.				
		Coordinate with the American River and Sacramento River groups when evaluating power plant bypass operations for species mitigation.	Ongoing	Reclamation will continue to coordinate with the groups to use data for decision-making and to incorporate real-time monitoring into decisions. Updates from these meetings are provided during customer meetings. In late October 2019, Reclamation and WAPA's engagement with the American River group resulted in mitigating a proposed bypass of Folsom Powerplant by applying available science.	Ongoing
		Coordinate with American River and Sacramento River groups to ensure use of best available science with plant bypass operations.	Ongoing	Reclamation will continue to coordinate with the groups to use data for decision-making and to incorporate real-time monitoring into decisions. Updates from these meetings are provided during customer meetings. In late October 2019, Reclamation and WAPA's engagement with the American River group resulted in mitigating a proposed bypass of Folsom Powerplant by applying available science.	Ongoing

	(III).1.b. - Coordinate with WAPA fisheries biologist in adaptive management committees.				
		Invite WAPA biologist to tour the Central Valley Office control center and provide an overview of CVO operations.	4/26/2019	Complete.	4/26/2019
		Invite WAPA fisheries biologist to attend adaptive management committees (American River Group and Sacramento River Temperature Task Group) to help ensure requests for power bypass operations are supported by best available science.	6/20/2019	Any information from those meetings is updated through WAPA's channels.	6/20/2019
	(III).1.c. - Review Shasta Water Control Manual (WCM) potential.				
		Reclamation will evaluate the forecast-informed reservoir operations when the U.S. Army Corps of Engineers opens this process for comment.	When situation occurs	This action will occur when the U.S. Army Corps of Engineers initiates revisions to the WCM.	When action is initiated by the USACE
	(III).1.d. - Provide updates on flood control operations.				
		Include flood operations updates in the weekly status reports to power customers.	8/30/2019	Flood operations updates are now included in the weekly status report to power customers when in flood operations.	8/30/2019
		Discuss as a part of Reclamation's "Power Update" at all Power Customer CCC meetings.	Ongoing	Reclamation provides water operations updates at each power customer CCC meeting. This includes flood control operations when relevant.	Ongoing
	(III).1.e. - CVP Hydropower Outage Scheduling - Framework at Maintenance and Major Project Planning Committee (MMPPC)				
		Inform customers about the concepts adopted in the CVP Hydropower Outage Scheduling framework document by posting to Reclamation's website.	6/25/2019	Content of the Outage Scheduling Framework was presented at the summer 2019 CCC meeting.	6/25/2019
		Include an agenda item on the next MMPPC and the MP SNR O&M meeting to discuss FY20 outage schedule and receive input from power customers.	9/5/2019	This action will occur when the next MMPPC is scheduled.	4/13/2020
	(III).1.f. - Coordinate O&M, outages at MMPPC				
		Include an ongoing agenda item for the MMPPC meeting to discuss and coordinate items related to O&M and planned and ongoing outages.	Ongoing	Reclamation added this item to its agenda and will continue to discuss and coordinate at MMPPC meetings.	Ongoing
		Develop a scheduling guide that Reclamation Area Offices will utilize to help schedule outages.	4/1/2020	Reclamation developed a guide and cost calculator. These are regularly used and discussed at MMPPC meetings.	4/2/2020
	(III).2.a. - Review and revise Hydropower Program Policy (FAC P04).				
		Revise existing Hydropower Program Policy to develop appropriate language that Power Resources Office will maintain, monitor, and renew procurement options to streamline regional hydropower program services in a way that is consistent with existing law and regulations.	7/3/2019	Complete.	7/3/2019
		Brief DC leadership on Policy overview briefing.	9/20/2019	Complete.	9/20/2019
		Publish revised Hydropower Program Policy.	12/1/2019	FAC P04 was revised and published on 10/23/2019	10/23/2019
	(III).2.b. - Track and evaluate the performance of implemented procurement streamlining solutions.				
		Develop specific benchmarks to measure cost savings by using new procurement tools.	11/1/2019	Reclamation will share the benchmarks on the MP Power Website and in customer meetings. Reclamation continues to explore procurement streamlining solutions. A benchmark strategy was developed in November 2019. At this point the Tennessee Valley Authority interagency Agreement has not been utilized on CVP projects. We have coordinated with them on upcoming work and plan to have them onsite to look at the proposed projects. We are also working on additional contracts to help in the streamlining efforts.	Ongoing
	IV. Implementation - Value of Resource				
	(IV).1.a. - Continued support for WAPA - Energy imbalance market (EIM)				

		Continue to meet with customers to evaluate benefit and costs for implementation.	4/2019 - Ongoing	Reclamation provided the data for the gap analysis to BANC. Reclamation continues work on planning SCADA modifications for entering into the EIM. Reclamation received approval from customers' Governance Board for funding the EIM in future year. October 2019 status: Reclamation (CVO) planning to develop new dispatch algorithm by Sep 2020. WAPA and Reclamation have held meetings up through April 2020 in regards to evaluating benefits and costs for implementation. Reclamation has developed an O&M cost rate.	4/2020 - Ongoing
		Continue coordination meetings with Reclamation, WAPA and BANC.	4/2019 - Ongoing	Frequent meetings continue to occur between Reclamation, WAPA, and BANC.	4/2020 - Ongoing
		Continue to provide support for following WAPA determination on implementing EIM.	Ongoing	Public comment period on EIM ended on 8/16/19. On Aug 27, 2019, WAPA made a determination to move forward with their Sierra Nevada Region's participation in EIM. Reclamation is continuing to support WAPA during implementation process.	8/27/2019
	(IV).1.b. - Explore water order schedules to allow for better forecasting of O'Neil Pump/Generation Plant operations and power demands.				
		Meet with SLDMWA, San Joaquin River Water Authority, and San Joaquin River Exchange Contractors to discuss option on improving O'Neil Operations.	6/12/2019	Water customers (SLDMWA, San Joaquin River Water Authority, and San Joaquin River Exchange Contractors) have agreed to improve forecasting of operations at O'Neill. - Complete.	6/12/2019
		Share power economics data with water customers.	6/12/2019	Economics shared - Complete.	6/12/2019
		Test the new process to transmit O'Neill and Tracy PUP schedules to the SLDMWA.	10/1/2019	A new process was developed and testing began in October 2019. The process includes transmitting daily pumping generation schedules between CVO and SLDMWA. Denver IT approved direct transfer of data to SLDMWA in December 2019.	12/31/2019
	(IV).1.c. - Adopt principles outlined in framework on improved operational flexibility.				
		Discuss as a part of Reclamation's "Power Update" at all Power Customer CCC meetings.	Ongoing	Power Update was provided at the CCC on October 10, 2019.	Ongoing
	(IV).1.d. - Advance discussions about optimizing operational flexibility scheduling.				
		Evaluate proposals submitted by power customers to determine whether they should become part of standard operations.	8/2019 - Ongoing	Experiments 1, which proposed lower minimum takes in daylight low value hours, and 2, which proposed lower minimum takes in surrounding hours by raising minimum takes in the morning on-peak hours, were accepted by Reclamation and WAPA to become a part of standard operations in August 2019. Experiment 3, under which customers pre-disclose portions of their intended BR schedule, appears to be a useful tool, but needs some automation to reduce the impact on schedulers for customer data collection. A new experiment (4) was proposed by a WAPA contractor at last customer meeting which would provide a volume target to customers with the goal of providing even more customer flexibility. The proposal is a recognition that there is a machine minimum at which some machines will operate at; an opportunity to watch lake levels to minimize between hours of midnight and HE16 and move production of BR energy to the high value hours Reclamation is considering this experiment and alternatives. Exp 4 could realize higher value from reshape, but could also create difficult generation transitions and create sub-optimal max peaking periods. All Experiments showed reduction on Max Peaking	Reference Region's hydropower website for graphic update presentation by WAPA. May, 2020
		Discuss as a part of Reclamation's "Power Update" at all Power Customer CCC meetings.	10/10/19 - Ongoing	Experiments are evaluated monthly and discussed regularly at Power Customer CCC meetings.	Ongoing
	(IV).2. - Track schedule for California zero carbon and carbon neutral rulemaking process.				
		Reclamation's Power Resources Office will track the schedule for the California zero carbon and carbon neutral energy rulemaking process.	9/1/2021	Reclamation is registered with California State list-serves responsible for SB-100 implementation and will receive updates as the rulemaking process continues. Reclamation's Power Resources Office will continue to work with the HPOC to keep awareness of this action. Reclamation supports Power Customer's desire to have large hydro count for renewable energy credits and understands the significance of this desire.	Ongoing
	V. Implementation - Improved Customer Service				
	(V).1.a. - Adopt framework for large-scale delta conveyance facility.				

		Engage power in the planning process and provide regular updates to power customers.	5/31/19 - Ongoing	The State of California continues to proceed with planning efforts for the Delta Conveyance Project. The state released the Notice of Preparation (NOP) for the new project. Reclamation submitted a comment letter that requested a clear delineation between the existing biological monitoring requirements and the monitoring requirements resulting from changes from system wide programs due to the addition of the Delta Conveyance Project; an initial plan that describes how DWR would operate the Delta Conveyance Project and comply with Federal Endangered Species Act requirements related to operations; and a detailed analysis of the effects of the Delta Conveyance Project on the CVP.	4/20/2020 - Ongoing
	(V).1.b. - Develop Mid-Pacific webpage on Reclamation's website to host initiative updates.				
		Develop webpage that contains the (a) coordinated action plan, (b) biannual updates, (c) accomplishments, and (d) reference materials for the CVP Power Initiative.	6/24/2019	The webpage and all associated information can be found here: https://www.usbr.gov/mp/hydro.html - Complete.	6/24/2019